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INTERDISCIPLINARY PRACTICES IN ONTARIO:
Past, Present, and Future

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Abstract: In Canada, the province of Ontario has had a rather turbulent relationship with interdisciplinarity as it has tried to implement this practice into the public school system. Specifically, the provincial government has repeatedly attempted to introduce such reforms as integrated units, harmonized objectives, and open-concept, student-centered pods, only to reverse course due to economic setbacks or popular backlashes. This paper examines the fluctuating status of interdisciplinary practices within the province since a Department of Education was first created in the mid-1800s. It also discusses the present state of interdisciplinarity in Ontario and ends with some tentative predictions of what the future may hold for this innovation.

Key words: History, Ontario, Canada, interdisciplinary practices, curriculum integration.

Introduction

Over the years, interdisciplinarity has taken many forms in the Ontario school system: integrated units, fused subject areas, team-planning, unified departments, and harmonized objectives, to name but a few. At times, sectors of the province so embraced integrated approaches that disciplinary boundaries blurred (at least in the elementary curriculum). Soon afterwards, this romance with integration inevitably cooled to be replaced with a return to the disciplines. This paradoxical trend continues today: While Ontario's environment appears to be largely indifferent to most forms of integration,

the province's newest course of studies contains a number of strong interdisciplinary possibilities. It would seem, therefore, that Ontario is on the cusp of possible engagement with such approaches once again.

To illustrate this situation of extremes, this chapter begins with a brief description of the context of education in the province today. This is followed by a history of interdisciplinarity as it has played out in Ontario. In doing that, we examine the continual sharp turns in policy direction towards (and away from) this concept. Finally, recognizing that the present period should be seen as a time of transition, we offer a vision of the future of interdisciplinarity in Ontario.

1. Counterbalancing Traditional and Holistic Reforms in Ontario

While exploring interdisciplinarity in Ontario, we believe it is important to keep in mind two important contrasting paradigms (or mindsets) that have influenced, and continue to influence, this province in its curricular decision-making: traditional and holistic. These paradigms are broadly defined, however, and should be seen as a guide more than as an accurate measure for governmental actions. The practices and values of these seemingly diametrically opposed paradigms—as we understand them—are described in Table 1.

Table 1
The Traditional versus Holistic Educational "Story"

Traditional	**Characteristics**	**Holistic**
Accountability to the public	**Overarching goal**	**Relevance to the student**
Ensure the status quo by sorting students by ability thus creating a compliant and productive workforce	Purpose of education	Democratic leveling of the playing field. Success for all.
Centralized	Structure	Decentralized
Top down control	Decision making	Grassroots empowerment
Standardization of curriculum and testing		Local "standards" for individualized learning
Creation of disciplines	Curriculum design	Interdisciplinary design
The best way to learn is in discrete separated packages		Learning occurs best through making connections

Table 1 is continued on following page.

Traditional	**Characteristics**	**Holistic**
Accountability to the public	**Overarching goal**	**Relevance to the student**
Back to the basics	Skills achievement	Basics and complex learning
Literacy and numeracy are all-important skills not related to other subjects		Learn the basics while using more complex concepts and skills (e.g., technology)
Rote learning	Approach to learning	Active learning
Passive learning/memorization		We learn by doing—not memorizing
Teacher as lecturer	Role of the teacher	Teacher as guide
Through expert knowledge, teacher transmits information to students		Student constructs knowledge through interaction with teacher/others
Phonics	Language study	Whole language
Structured learning independent of real life context—language broken down to its smallest parts		Learn language in a real world, holistic context
Teacher-proof material	Classroom materials	Teacher-developed material
Teachers not capable of creating good lessons		Relevant material can be developed locally
Some students will do better	Belief of students when testing	All students can succeed—in different ways at different things
A ranking hierarchy through norm-referenced assessment (bell curve)		Criterion-referenced assessment (allows a J-curve)
Summative assessment	Purpose of testing	Diagnostic, formative assessment
End product is all that counts		Assessment enhances learning
Paper and pencil testing	Types of assessment tools	Varied assessment techniques (esp. performance assessment)
What counts is what can be written		Addresses multiple intelligences and ways of knowing
Individuals seated in rows	Classroom seating plan	Varied seating plans (i.e., groups)
Student learns best alone		Collaborative learning—learning through social interaction

The history of curriculum integration in this province can be described as a pendulum continually swinging back and forth between these two

seemingly irreconcilable mindsets of accountability and student engagement through curriculum relevance (Table 2). As shown in more detail later in this chapter, these educational policies have been due, in large part, to political maneuvering, popular perception, and economic circumstances, more than to academic research and theory-building in this province. Scholarship and conceptual design do play a role—but all too often the other three elements take a central position when the form of educational reform is decided.

Table 2
The Pendulum Swings in Ontario Education

Time Period	ACCOUNTABILITY ⟷ RELEVANCE Traditional models ⟷ Holistic integrated models
1840-1936	Drive for standardization and segregation of disciplines
1937-1950	Progressive elementary curriculum and the Enterprise Method
1950-1960	Incremental back pedaling to increase accountability
1960 - 1966	Scientific, segregated curriculum (for efficiency)
1967 - 1974	Hall-Dennis influence - humanized, decentralized curriculum
1975-1983	Incremental back pedaling to increase accountability
1983-1993	Unified secondary curriculum with separate subjects
1993-1997	*The Common Curriculum* under Socialist Government – 4 broad subjects
1997- 2003	Conservative *Curriculum* imposed rigorous segregation and standards
2002 - Now	Liberals begin to integrate accountability and relevance to enhance both
New Story	Further synthesis of accountability measures with meaningful curriculum stressing optimum learning strategies [to be determined]?

2. The Context of the Present Ontario Educational System

In Canada, responsibility for education remains under the domain of the provincial governments, and thus there exists no "Canadian" policy as such. Like the nine other provinces, the body that oversees the Ontario system is a provincial Ministry of Education which administers publicly-funded elementary and secondary school education according to directions set by the government of the day. In 2007-2008, there were 72 school boards, 4,026 elementary and 897 secondary schools, 116,180 teachers, 7,368 administrators, and 2,087,588 students within this system (Ontario Ministry of Education, 2010b). Divided

into 12 grades and a variety of subject areas (a core with options for the later grades), the public educational system follows a Ministry-mandated set of curriculum guidelines, policies, and resource documents.

However, while all provinces are entities in their own right, each is usually influenced by and influences the trends across Canada and the United States. For example, when standards-based education with its inherent value of accountability was introduced in the mid-1990s across North America, this approach was also adopted in Ontario; this included diminished resources, reductions in teacher preparation time, and standardized testing (Hargreaves & Shirley, 2009). The *Ontario Curriculum* guidelines began mandating expectations for all subjects from K-12, and teachers were expected to teach to these expectations. The Education Quality and Accountability Office (EQAO), an arm's length organization from the Ministry, was created with the mandate to ensure greater accountability and better quality in education (EQAO, 2010). It also became responsible for developing and implementing provincial tests for grades 3, 6, 9, and 10.

The present Liberal government has maintained this mandate today. Their core priorities are three-fold and listed on the Ministry of Education website (Ontario Ministry of Education, 2010a):

1. High levels of student achievement with a commitment to improve elementary school literacy and numeracy and to improve high school graduation rates;
2. Reduced gaps in student achievements;
3. Increased public confidence in publicly-funded education through strengthening the role of school as community.

To support this mandate, there is an ongoing emphasis on test-based accountability coupled with a number of policies to develop the capacity of the educators. To signify the importance of measurability and systematic study, a chief research officer was appointed and a number of research-based teams was created within the Ministry. All aspects of education and innovations are to be evidence-based and informed by research. Professional learning communities under the Municipal Information Systems Association or MISA were established to promote a healthy data culture and the sharing of action research and collective inquiry (MISA, 2010). As well, the Ontario Education Research Panel (OERP) has been created to encourage, promote, and disseminate examples of research, and to practice innovations already being developed in boards, schools, and classrooms (Ontario Ministry of

Education, 2010b). The panel is said to offer a collaborative bridge between boards and Faculties of Education, researchers, community agencies, and Ministries. The architects of this ongoing reform claim, therefore, that improvement in student achievement has not been accomplished through punitive measures, but rather through following vital principles grounded in research and building partnerships with educators and policy makers (Levin, Glaze & Fullan, 2008).

Therefore, alongside this propensity for measurability has been a recent drive for more relevance, stakeholder participation, and integration within the education system. Hargreaves and Shirley (2009) have hailed it as a great success at balancing accountability with professional autonomy: "Changing up, down, and across, Ontario is arguably the most sophisticated Third Way system of educational reform in existence" (p. 17). However, they also claim that the Third Way continues to get waylaid by the province's emphasis on evidence-based data and has focused on short-term solutions rather than transforming teaching and learning for the "Knowledge Society of the 21st Century." Indeed, curriculum integration has not been a dominant theme in the reform, and until very recently, little has been done at the policy level to directly encourage boards to adopt an integrated approach. Yet, by 2010 a number of events have indicated a shift on the educational horizon, and the seeds for a return to relevance seem to be in the process of being planted.

How did we come to this particular juncture? Why is there a seeming disconnect between integrative practices within the Ministry itself and at the various community levels? Where are we going from here? In order to answer these questions, it is necessary to look back at the history of interdisciplinarity in this province. Specifically, we will examine nine distinctive policy shifts that Ontario has undergone in the last 150 years.

3. The Old Story

3.1 Period 1—Establishing Accountability (to 1936)

In 1867, when Ontario joined Quebec, Nova Scotia, and New Brunswick to form the Dominion of Canada, the province already had a firmly established education system. It had been created over 20 years earlier when the British Crown decided to centralize the fairly scattered school system as part of a plan to quell a number of uprisings and fierce political discussion. Egerton Ryerson was hired as the Superintendent of Schools, and a Department of Education was created to reform education. Taking up the job in 1844, Ryerson immediately left for a "Grand Tour" of Europe and the United States

to observe the school systems; when he returned he was given the authority to create a new system out of what he saw (Ryerson, 1847).

Like the famous American educational reformer Horace Mann, Ryerson was especially impressed with the Prussian model with its system of levels, subject disciplines, and teacher professionalism. Ryerson chose the Commissioners of National Education curriculum model from Ireland due to the balance it struck between Protestant and Catholic education. His resulting curriculum consisted of "Several Branches of elementary education"—15 separate subjects, and a systematization of course materials and methods. He argued for collective instruction as more effective pedagogy than solitary learning. Curtis (1988) commented about the innovations: "This in itself is remarkable; subject specialties were relatively little developed in the common schools of the Canadas of the 1840s, and specialized texts did not figure in the education of many people" (p. 107).

As a basis for instruction, Ryerson procured rights to the *Irish National Series of Readers* and distributed these books to all teachers under his jurisdiction. Paramount among these subjects was the core of the three R's: "The great object of our common schools is … to make a good reader, writer and calculator of every boy and girl in Canada; and the other studies in the elementary Schools are important, as they teach how to employ these arts upon proper principles and in the most useful manner" (Ryerson, 1847, p. 107). Ryerson set up a subject-based system; the capacity to read was tied to texts containing "useful knowledge" and assessment of this capacity was verified by the process of questioning (Curtis, 1988). He created the basis for what would become a province-wide, uniform course of studies constructed of a hierarchy of grades (1-13).

The Irish readers remained the official curriculum until Ontario became part of the united "Dominion of Canada." Then, with Ryerson in his final years, the title (and little else) of the texts was changed to the *Ontario National Readers*. From this time to the mid-1930s the main thrust of the Ontario curriculum then changed very little. Like most of North America, the province continued to adhere to a formalized, discipline-based approach to education involving rote-learning, drill, and memorization. As the Ontario educator J.H. Putman (1938) recalled:

> No music, no art, no literature except school readers, no physical exercise, no nature study, no organized games, and no school concerts. Our only device to vary the monotony of reading, writing, spelling, arithmetic, geography, grammar, history, and bookkeeping was a Friday afternoon spelling match (p. 8).

New guidelines and piecemeal additions (e.g., industrial arts) were eventually created, but by a handful of subject specialists working under the Elementary or Secondary Education Branches of the Department. A sizable number of inspectors were charged with the enforcement of the curriculum at the school level, simultaneously evaluating and guiding teacher performance in an effort to secure uniform standards throughout the province. Finally, to test students' capabilities of basic skills and factual knowledge, standardized departmental exams were given at almost every level of the elementary and secondary systems.

3.2 Period 2—Relevance Arrives in Ontario (1937-1949)

While the progressive movement and its emphasis on relevant curriculum swept much of North America in the late 1920s, the Ontario government did not buy into this reform until 1937. This Departmental attitude was in sharp contrast to that found in other provinces in the country such as British Columbia, Saskatchewan, and Alberta, which began to embrace the major tenets of "Progressivism" in their new courses of study (Phillips, 1957). As well, a growing number of Canadian educational scholars promoted interdisciplinarity as a more effective and relevant form of education than the present system being offered (Stamp, 1982; Wood, 1985). Both the Ontario Teachers' Federation and the Ontario Education Association, for instance, had formally adopted aspects of the progressive approach as early as 1884 (Cochrane, 1950; Campbell, 1975), and increasingly encouraged cross-border visits from the Progressive Education Association (PEA) after the turn of the century.

By the 1930s, the Ontario branch of the New Education Fellowship (the equivalent to the American PEA), the Ontario Education Association, the three teachers' federations, the trustees' association, and the Home and School Federation all openly disparaged traditional, disciplinary curriculum with its rote-learning, and actively promoted an "inquiry" approach to learning. By 1934, these associations had merged their resources to form the Ontario Educational Research Committee (OERC); their united goal was "a revision of the curriculum ... that it may specifically be adjusted to growth needs and experiences of the social group for which it is intended" (Morris, 1934, p. 10).

The Ontario Department of Education only bowed to the pressure with the election of a Liberal government in 1934 (after a three-decade rule by the Conservative party). By 1936, the new Minister of Education, Leo J. Simpson, announced that a reformed course of studies for the elementary

system would be created. Simpson insisted that the new curriculum would be based on more "progressive" methods. The result was the publication in 1937-38 of *The Elementary Programme of Studies for Grades 1-6* (dubbed the "Little Grey Book" after its cover) and Grades 7-8 (dubbed the "Little Blue Book") (Ontario Department of Education, 1937, 1938). This reform has since been called "revolutionary," both in terms of its approach to teaching and in its philosophy of education (Phillips, 1957; Stamp, 1982). However, while these documents promoted interdisciplinarity at the elementary level, secondary designers and educators remained resistant to most progressive changes to the curriculum.

The new ideas found in these documents were not fundamentally "home grown," but consisted of innovations imported from the prairies, the United States, and Great Britain. Most importantly, *The Education of the Adolescent* (Hadow, 1926) from the British *Hadow Reports* seemed to form the basis of Ontario's new philosophy. Quoting extensively from this document, the *Little Blue Book* (Ontario Department of Education, 1938) declared that children are characteristically confused by subject divisions, abstract concepts, and too much content. Instead, it recommended that a curriculum be created "… inspired, not by an attachment to conventional orthodoxies but by a vivid appreciation of the needs and possibilities of the children themselves" (Ontario Department of Education, 1938, p. 5). Found in the introduction of the new curriculum, quotations from the 1926 document advocate for the drastic reduction of separate subjects —based on the teacher's discretion. It further recommends that the curriculum be viewed as a whole, with subject areas melting away. Teachers could *fuse* a certain number of subjects to cut away "the dead wood of a formal tradition" (Hadow, p. 5), and create a more "humane or liberal education" that would balance the individual and society (Hadow, pp. 6-7, 10, 105-106).

While the introductory sections call for radical changes, in reality, the Department would not allow teachers the freedom to dictate the organization of the curriculum. As a compromise, therefore, the body of the new curriculum documents called for the fusion of the existing 15 separate subjects to seven, and mandated that all classrooms should follow this approach to education. English, (which had formerly been taught in four different courses as reading, grammar, spelling, and writing) was now taught in one large block of time. The same applied to mathematics and to science, which had acted as umbrella subjects for the previous myriad of separate sub-disciplines. Most significantly, the long separated subjects of geography, history, political economy, and civil government were fused to

create "social studies." The use of "practical" problems, which the *Hadow Report* had touted as the most efficient stepping-stones for the adolescent mind to higher, abstract thought, were mandated throughout every subject area in the new curriculum documents.

Instead of following the *Hadow Report's* call for decentralization, the Department then began implementing the new curriculum in the same top-down organizational way that had been used in Ontario since Ryerson had taken office: It disseminated the course of studies to the teachers as a fait accompli with a strict one-year timeline and no assistance. By 1942, however, after a myriad of complaints had come in from teachers (many brought out of retirement to aid the war-time attrition of young educators), the Department added a section on the use of the "The Enterprise Method" as the proper technique for progressive teaching (Ontario Department of Education, 1942).

First introduced in the United States by W.H. Kilpatrick (1918) as the "project method," the "Enterprise Method" was designed to change pupils from passive recipients of information to active participants in co-operatively solving a problem of interest. It required a change of role for the teacher as well, demanding more flexibility of timetables and classroom facilities. It also called for group work, oral reports, individual research, and critical thinking.

Although the updated course of studies (Ontario Department of Education, 1942) attributed that recommendation of the Enterprise Method to inspectors' observations and teachers' comments, this innovation seems to have come from the work of Alberta scholars, Drs. Donalda Dickie and Freeman Macomber. It was a three-part method: the planning stage undertaken by the teacher and to some extent the students; a second stage in which the students solve the problem; and a summative culmination activity like a production or creation of a concrete object (Ontario Department of Education, 1942). The amount of time to complete the project was determined by student interest rather than bells.

With no field-testing or feedback, teachers were expected once again to implement this "humanistic" reform within a one-year time limit. For the first time, the Department did acknowledge the use of professional development. According to the new curriculum document, teachers were to take responsibility themselves for holding discussion groups and to search out sources of enlightenment. It argued that teachers of different subjects should occasionally meet and discuss common linkages. But curiously enough, the Department discouraged teachers from sitting in other classes, stating that it would be impractical. Mixed reactions emerged from the educational community—some embraced it; others fiercely attacked it based on its vague instructions and the increased workload they were expected to take on (Stamp, 1982). These mixed reactions would become a recurrent theme in the history of interdisciplinarity in Ontario.

3.3 Period 3—The Baby Boom and an Incremental Shift to Accountability (1949-1959)

With the end of the Second World War, a number of educational stakeholders called for a reformed, decentralized public school system in line with the philosophy set out in the elementary curriculum. Most vociferous were the media sources that were sympathetic to teachers and school boards (Goulson, 1966). By late 1948, the Department heard daily rumors that teachers throughout the province were taking curricular matters into their own hands, forming informal groups to create their own revised guidelines, implementation approaches, and professional development. Of course, this was what they had been instructed to do in the 1942 document (Ontario Department of Education, 1942). However, with a sudden fear that an educational revolution was stirring beyond the grasp of the Department, the newly-appointed Minister of Education Dana Porter seized on the opportunity to become the lightning rod for reform (Fleming, 1972a).

In 1949, *The Porter Plan* delivered extensive changes to the educational system. Drawn up by Director of Education John G. Althouse and the staff of the Department, it provided that the responsibility for the outlining of courses "will be placed as much as possible at the local or municipal level, particularly so in the fields of social studies, science, art and related subjects" (Fleming, 1972a, p. 4). This would entail a major shift to decentralize curriculum processes. The 1949 Minister's *Annual Report* (Ontario Department of Education, 1949), reflected the progressive spirit of this new arrangement:

> The freedom it permits should help solve some of the problems of retardation of the pupils held back because of weakness in one subject or another. A free organization should permit progress in each subject at a rate suitable to the capacity of the individual, and the provision of subject matter related to his interests and needs. (p. 7)

This newfound freedom was undoubtedly based less on previous British theory and more on a concern for the continued student dropout rate and apathy in the classroom—at this time, only 18 percent of children went on to secondary education (Ontario Department of Education, 1949). The Department repeatedly advised local curriculum committees to make the

"programme of instruction more realistic and of more immediate interest" (Ontario Department of Education, 1949, pp. 8-9).

Curriculum I:1 was the new non-prescriptive guideline put out by the Department: Teachers' committees appear to have been left to interpret and adapt the curriculum at will (Ontario Department of Education, 1951). However, with a desire to keep chaos at bay, the Department also mandated that there should be a "coordination of courses of study into a unified and continuous programme" (Ontario Department of Education, 1951, p. 4). Primarily, the Department continued to insist that certain subject areas existed with "natural" links to each other. This is made especially clear in the social science section where all the various sub-disciplines of history, geography, and civics are brought together. Similarly, in the science section, the authors state that "an effort has been made to unify the various topics into a related whole" (Ontario Department of Education, 1951, p. 170).

To deal with the increasing amount of knowledge and skills within the curriculum brought in after the war (for the escalating amount of science in school, for example, see Bush, 1945), the Department created "Home Room Teachers" to bring some organization to the core subjects. According to *Curriculum I:1* (Ontario Department of Education, 1951), teachers should teach the naturally related core subjects like English and social studies or math and science, and this would keep a natural unity to the curriculum. As well, these teachers would be aware of what was going on in other courses and grades to aid coordinated planning and the reinforcement of skills across the curriculum. Steps for multidisciplinary planning were actually mentioned enthusiastically, if very broadly, in the introduction of *Curriculum I:1* (Ontario Department of Education, 1951). However, few concrete steps ultimately were taken to bring teachers of different subjects together for joint projects or team teaching.

The thematic approach continued to be a prime teaching tool in this period. However, it became far different from the child-centered Enterprise Method. Teachers were now supposed to choose the newly designed "units" based on strong suggestion by the Department. The intention of this method seemed to be different as well. Students were not co-designers or team players. Instead, the point of the exercise was to present information and skills in a way that might interest and enthuse the students. Furthermore, these units, unlike the previous period, appeared to stay within the boundaries of their subject areas and time schedules. Only the science section (Ontario Department of Education, 1951) brought in other areas, and projects were not encouraged to last more than a few hours.

Despite flamboyant beginnings, therefore, local control quickly began to shrivel on the vine. *The Porter Plan* was, in fact, a way for rebellious teachers' innovations to be officially sanctioned, legitimized, and then re-subjugated back under central power (Pullen, 1955). While teacher empowerment in curriculum development may have been a key issue, Pullen points out that this proved difficult in reality. In creating a new curriculum, a strict chain of command had to be followed. Teachers could voice their opinions and criticisms to a school committee, which in turn responded to a district committee. This committee would then create a new curriculum, operating under the supervision of a central coordinating committee, which had the ability to veto these subject-centered committees if it so chose. While 82 committees were immediately set up around the province by local authorities, and over 1,200 revised courses were implemented by 1951, Fleming (1972b) later added that these "courses of study did not, however, break much new ground" (p. 189). Rather, they seemed to be minor variations of *Curriculum I:1*. By 1960 only six committees were left.

The retreat from interdisciplinarity may have been, in part, due to the incredible demographic changes occurring at this time in Ontario. To cope with the unexpected baby boom and skyrocketing student enrollment after the war, the Department was forced to lower its teaching standards to hire as many new educators as possible. It is not surprising, therefore, that a 1955 poll indicated that few teachers expressed a desire for control over the curriculum (Pullen, 1955). Indeed, many new educators stated that they were scrambling to get themselves prepared for the upcoming school year and asked for more concrete directions from the Department.

Faced with indifference from the teaching community, an unstable student population, and daily criticisms from the floor of the legislature, the new premier, Leslie Frost, soon realized that Porter's reforms had become a losing proposition. A return to conservative, centralized control of the curriculum was necessary to restore the public's confidence in the government. He replaced Porter as Minister of Education with a longtime Departmental bureaucrat, William J. Dunlop. The complete antithesis of Porter, Dunlop put forward a rather paternalistic view of education: Teachers were to inculcate a uniform body of knowledge, promulgated by a centralized Department and founded on established thought. Basing his argument on Hilda Neatby's *So Little for the Mind* (1953), he stated that it was his intention to remove from the curriculum "every vestige of progressivism" (Dunlop, 1958, p. 777). In consequence, very little interdisciplinary activity or curriculum reform emerged from the Department during the 1950s.

3.4 Period—The Cold War and Full-Force Accountability (1960-1966)

The launch of the first man-made satellite Sputnik in 1957 and heightened perceptions of the Cold War set Ontario (and North America) firmly on a path away from progressivism and towards accountability. For this reason, *Curriculum I:1* (Ontario Department of Education, 1951) was perceived as being incapable of providing cutting-edge education. Specifically, critics demanded a "scientific mentality" be inculcated in students in order to train them for the workforce and the future. As well, they called for a "scientific mentality" to be inculcated in school administrators. Modern mechanistic and human relations models had to be used in modern school systems to efficiently deal with the influx of new students. To achieve utmost accountability, it was necessary to centralize schools into more regional units and to break the school day down into smaller subject-centered components, taught by specialists.

Once again, Premier Frost found a suitable replacement Minister of Education who mirrored the spirit of the time. The young and talented statesman John Robarts made no bones about his intentions to fulfill the "scientific" recommendations and modernize the Ontario school system.

The newly founded Ontario Curriculum Institute (created by several university and teachers' committees) immediately indicated a deep dissatisfaction with the way the Department had constructed and revised the curriculum in the past. In response, Robarts selected educators, university scholars, and educational critics (many of whom were members of the OCI) to create new courses of study (Stamp, 1982). Numerous courses were quickly created for science, technology, and vocational training. Unlike the earlier periods, however, no unified document existed for this period; *Curriculum I:1* was replaced in a piecemeal fashion. In fact, these curriculum designers saw subject areas as fairly separate bodies of knowledge with a distinct flavor necessary to "maintain the integrity of the discipline" (Ontario Department of Education, 1961, p. 8). The documents do indicate that some crossover of content and skills might happen at points of contact and must be exploited for efficient teaching, but to keep the system of dissemination flowing effectively, separation of subjects must be retained and enforced. While to students, connections might seem unclear and subject areas isolated, all the pieces would fall into place—theoretically—by the time of graduation.

While Robarts implemented numerous reforms at this time (broader time limitations, special in-servicing, frequent curricular review and revision), this was perhaps the bleakest period for interdisciplinarity, as the setup and implementation of the guidelines in fact promoted a dis-integration of the curriculum. Teachers were seen as "specialists" in the secondary level, one-room schools were destroyed and replaced by the more efficient regional schools, and once-fused subjects were again dismantled. This was supported in educational scholarship at the time by many behavioral (Skinner, 1953) and cognitive (Bruner, 1963) psychologists. A good example of this situation can be found in the elimination of social studies at this time to be replaced with two distinct courses, "history" and "geography," each with its own precise area of interest and aims (Ontario Department of Education, 1962). The Department also continued to eliminate most of the "learner-centered" activities in the documents with the argument that "school was to challenge children—not to entertain them" (Ontario Department of Education, 1966, pp. 5-6). Robarts (1962), in fact, agreed with his predecessor that there should be a "stiffening" of the course of study, and he attributed the earlier unchallenging curriculum to "a hangover from what might be referred to as Deweyism or progressive education." With the load getting heavier at the secondary level, he concluded that students could no longer "teach themselves" (pp. 2165-2166).

The educational changes of this time can perhaps be viewed as a microcosm of events that had been taking place in Western society through the greater part of the century. Until this time, educational philosophy had always been most highly influenced by the humanities and liberal arts. To this mentality, the curriculum was seen as almost an organic body, one and indivisible. Integration was more than just finding connections, therefore, but in bringing that body together to find meaning and purpose for the student. The ultimate objective here was to create the *paideia*—the all-round "good" person and citizen. The changes that Robarts promoted allowed the Scientific-Cartesian Model to usurp this worldview. Individual development or social skills seemed no longer to be of any great concern for the Department, replaced by a desire for students to know a certain amount of information and academic skills in a prescribed amount of time (13 years) so that they might be properly trained for work—presumably in a scientifically-related profession (Stamp, 1982).

3.5 Period 5—Celebrating the Return of the Relevant Curriculum (1967-1974)

Student revolts in Paris, protests across the United States, and the sudden influx of a multitude of alternative schools all demonstrated the changing mood of the public towards education during the second half of the 1960s.

Scholars such as Neill (1960), Piaget (1967), and Holt (1964) disputed many of the previously held claims of traditional education to reassert the importance of "themes," "interdisciplinary units," student-directed learning, the development of affective as well as cognitive skills, and other revolutionary concepts.

In response to increased demand for individual freedom of choice, flexibility and participation from schools, universities, and parents, the new Minister of Education Bill Davis (1965) led a movement to once again decentralize the school system. He argued that if teachers and local administrators felt no ownership in the education process, there would be a general apathetic malaise overlaying the entire system (Davis, 1965). Within a short time, Davis and his newly appointed and re-organized "progressive" staff of curriculum specialists became convinced that comprehensive reforms were necessary.

The *Provincial Committee on Aims and Objectives of Education in the Schools of Ontario* (henceforth known as the "Hall-Dennis" Commission) was formed in 1965 with a mandate to assess the state of education in Ontario and to recommend methods for revising the system. In the spirit of collaboration, the 25-member committee met with numerous interest groups, universities, parents, and teachers over the next three years. Of special importance was the influence of Britain's "progressively-inspired" *Plowden Report* (Central Advisory Council for Education, 1967). This report pointed out the importance of concrete tasks (i.e., lab work) and hands-on activity as providing the "basis for an integration of math with science (biology, mechanics, electricity, light, etc. …) with geography (areas, maps, mapping, etc.) with crafts (study of shapes) and with art (study of designs)." It also suggested the inventive use of textbooks, "real-life situations," and the thematic grouping of the disciplines. Finally, the report dwelt on the importance of collaboration between British teachers and students.

In the same vein as the British report, the "Hall-Dennis" Report (PCAOESO, 1968) called for an "individualized programme of instruction for the development of the potentialities of the child," and the "de-emphasis of competition in the classroom." School should be "viewed as a place of personal growth and development based on a learning process of self-discovery" (p. 9). The report called for the replacement of the present system of rigid expectations, segregated grades, and subjects with the introduction of a system of education revolving around the individual needs of the student, with a minimum of supervision and guidance. Applying these recommendations with enthusiasm and rigor, the Department began by creating curriculum committees around four broad areas of study (rather than subject-specific ones): Humanities; Math and Science; Social Sciences; and the General Group. Any ensuing documents were left as fairly broad frameworks, open to interpretation at the school and classroom level. Fleming (1972c) asserts: "The new arrangement was intended to meet the need for integration of certain aspects of certain subjects and to lay the foundation for a more flexible grouping of options in school programs" (pp. 37-38).

The *Science* curriculum (Ontario Ministry of Education, 1972a) is characteristic of the Department's belief in this renewed "natural" integration of the subject areas: It states:

> Education can become a lifelong search for a comprehensive understanding in which there are no artificial compartments of school subjects. At times the subject Science should melt away completely so that a student may be able to study segments of his real world in a natural fashion. (p. 9)

Clearly, the term "unity," mentioned in almost all guidelines, had little to do with any artificially manufactured "course of studies" by a centralized authority. Instead, a truly integrated and meaningful curriculum could only stem from "natural linkages" between subjects, discovered at the primary stakeholder level, for "the criterion of successful integration is its unforced quality" (Ontario Ministry of Education, 1972b, p. 4). At the documents' base, therefore, was a deep-seated belief in individuality, and revulsion to any uniform model of education. Although the intensity varies from course to course—all state that curriculum design should be created around students' interests, differences, and demands, and that teachers should experiment with new approaches, gauging them by student interest (Ontario Ministry of Education, 1972a, 1972c, 1973a, 1973b).

The thematic approach (similarly described as the earlier "Enterprise Method") was recommended. However, teachers were to then take this one step further. Many documents echo the admonition made by *Technology* (Ontario Ministry of Education, 1972d) that "it would be contrary to the spirit of this document if planning and presentation were to be limited to the resources of a single subject or person" (p. 5). Broad references, in almost all guidelines, extend the thematic approach beyond the classroom and encourage teachers to "explore the possibilities of inter-disciplinary planning in which subject boundaries are blurred" (Ontario Department of Education, 1969a, p. 9). This would entail meeting and collaborating with other teachers within the school—perhaps in a team-planning or

team-teaching setting. Typical examples are offered in the intermediate documents *Science*, (Ontario Ministry of Education, 1972a) *Environmental Science*, (Ontario Ministry of Education, 1974a); *Consumer Studies*, (Ontario Ministry of Education, 1972e*)*. This procedure was even given the special label—"interdisciplinary studies." Unlike the earlier 1930s reforms, the drive for relevance extended beyond the elementary level. While higher grades did maintain some formal, disciplinary structure, students were given a great deal of choice as to the courses they wanted to take.

One extreme aspect of the student-centered approach surfaced—students as collaborators in planning. Even the most liberal of periods in the past would not allow students such power over their own education. Now, the reasoning went, students would have greater interest and sense of ownership if they had some control over the creation of the course. In *English* (Ontario Department of Education, 1969a*)* student collaboration should be the backbone of the course: "This inter-disciplinary approach necessitates much cooperative planning by students and teachers" (p. 11). This is repeated in *Latin* (Ontario Department of Education, 1969b), *History* (Ontario Ministry of Education, 1973), *Geography* (Ontario Ministry of Education, 1973b), and *Family Studies* (Ontario Ministry of Education, 1974b).

To aid in the implementation of this interdisciplinary curriculum, the Department earmarked an incredible amount of funding for regional offices, created specifically to help local teachers through professional development. Of most interest was the introduction of summer courses with the title *Integrated Studies* to help teachers use the everyday experiences of children to broaden skills and concepts traditionally associated with individual subjects (Stamp, 1982). Accompanying this was the Departmental publication of *Dimensions in Education* that was sent to teachers monthly to keep them abreast of changes to the curriculum and innovations to teaching in general. For the remainder of this period excitement swept the Ontario educational community, given a feeling of liberation from a prescribed curriculum. In fact, the Department even permitted a number of experimental school configurations. Experimental Free schools were opened in Hillsburgh and Toronto, while "open concept" classrooms were widely constructed across the province in attempts to find new ways of meeting the demands of the student.

3.6 Period 6—The Slow Return of Accountability (1975-1983)

By the early 1970s, a malaise with the new curriculum set in. Parents

complained that they did not know how well their children were doing because there was nothing with which they could compare. Educational scholars pointed out that there was no accountability in the system, so the Ministry would not know where to target aid. The media generally criticized the new program as too superficial with too many options for students, weakening the focus of the curriculum. Finally, teachers themselves (especially new ones) felt that too much freedom was not such a good thing and pleaded for more guidance.

While the new Minister of Education, Thomas Wells (1974), maintained the primacy of child-centered education, in a press release he bluntly agreed "… that the elementary school curriculum is facing a sort of credibility problem in the eyes of many people" (p. 1). At the heart of the problem was the decentralization of the curriculum responsibility and the abandonment of teachers "to struggle with guidelines that have been too vague, too broad and inadequate in their guidance" (Wells, 1976a, p. 2).

Wells assured the public that the Ministry was "going to take a much firmer grip on what was actually being taught in the elementary and secondary schools of the province" (Wells, 1976a, p. 4). Guidelines would be created that would be considerably more prescriptive and descriptive than had been seen in the previous period. He was emphatic that the regional offices would also "play a much more active and aggressive role in monitoring curriculum trends across the Province, and to ensure that courses of study being used in the schools are of the highest order" (Wells, 1976a, p. 4). However, it was also agreed that little would be accomplished through the wholesale eradication of Davis's curricular reforms, and any radical changes made in the cause of "back to basics" might eventually be detrimental to pupils. In the end, Wells (1976b) stated that "in some respects the pendulum of change in education all across North America swung a little too far during the 1960s," and he hoped that a new "core" curriculum (in the elementary and intermediate levels, at least) would do much in "easing the pendulum back to a more balanced position that will benefit the vast majority of students" (p. 1).

To create this new "core" of studies, a series of phases was created based on earlier recommendations by the *Hall-Dennis Report* (PCAOESO, 1968). First, the Curriculum Development Branch would review the present documents. Second, committees composed of representatives from all educational stakeholders would develop guidelines that could be adapted to local needs (Ontario Ministry of Education, *Annual Report*, 1977-1978). The draft would then be put through a validation process, which

Wells hoped would bring much more credibility to these new "affirmative" documents. The crucial element of these guidelines was the inclusion of certain "core" expectations; pedagogical approaches were left to individual teachers (as long as the integrity of the course was maintained). What had become evident to the Ministry was that while much local autonomy should be maintained, a system had to be created whereby there could be some accountability to the public.

The documents took a different approach to interdisciplinarity. In an attempt to reestablish a sense of cohesiveness and solidity in the curriculum, fairly subject-specific documents with internal consistency were reemphasized. This is seen especially throughout the *English* document (Ontario Ministry of Education, 1977), where teachers are admonished to create an "Integrated English Program"—that is, one that blends the four language components of reading, writing, speaking, and listening into a unified, balanced whole. Similarly, the *Science* document (Ontario Ministry of Education, 1978) insists that if a logically sequenced and objective-related program could be created, a "unity of science" would be achieved.

With such an emphasis on internal integration, there appears to be a concomitant drop in higher-level subject integration ventures. No barriers were placed in the way of teachers who wished to try interdisciplinary approaches. Themes and several points of contact between subject areas are mentioned, but the Ministry argues that this should only be attempted after a coherent, subject-centered program has been developed first.

The one seeming success in high-level integration was the Language-Across-the-Curriculum policy. Spurred on by a host of research in academic and popular educational journals at the time, this seems to have been relatively safe ground politically. It also represented a growing sophistication in cross-subject integration techniques not seen since the program was united under one document. The policy was the product of at least 12 separate committees over a five-year period and represented an incredibly complex process. However, this reform seems to have been successful only because "natural links" could be shown with traditional literacy skills in all course guidelines and support documents. Math, science, or French skills could not make this same transition. Indeed, the creators of the *French* (Ontario Ministry of Education, 1980) curriculum believed that the attainment of a separate course study of French was a powerful symbol of its newfound status within the curriculum.

The greatest casualty of these reforms seems to have been student ownership of their education. Gone were the freewheeling, pupil-led

activities of the previous period—now there was a more formalistic feel to it. The only classes that tried to promote interactive activity as a means of stimulating student interest were the traditionally hands-on subjects. *Science* (Ontario Ministry of Education, 1978), as it had in the past, placed great emphasis on student-performed experiments. *English* (Ontario Ministry of Education, 1977) stated that teachers should encourage student collaboration in the learning process—but only at the secondary level after they have been properly trained. *Dramatic Arts* (Ontario Ministry of Education, 1981), as to be expected, stated that experiential learning through acting, spontaneous activities, and verbally responding to readings would stimulate greater learning and interest.

3.7 Period 7—Seeking a Balanced Curriculum (1984-1991)

By the 1980s the Ministry was, once again, seeking a balance between accountability and relevance. Secondary education, largely untouched for a decade, was the reform target. A series of external panels called "Secondary Education Review Project" (SERP) submitted its joint report in 1981. Subsequently reworked by Ministry officials, and published as *Renewal of Secondary Education in Ontario* (ROSE), it recommended a more unified system. The result was the distillation of the approximately 100 scattered Intermediate and Senior guidelines into 20 linked documents (Ontario Ministry of Education, *Annual Report,* 1983-1984). For the first time Grades 7-12 would be grouped as a continuum. *Ontario Schools: Intermediate and Senior Divisions* (OSIS) was first circulated to teacher federation affiliates, schools, boards and special interest groups, and finally distributed to all schools in 1983; implementation was to take place incrementally, one grade level per year (Leithwood et al., 1987). OSIS became the basis for curriculum planning and for a unified educational philosophy. Even when the Conservative government was overturned in 1985 with a Liberal victory, the policy remained in place for the next decade.

In reading the documents, it is clear that the Ministry viewed the curriculum as a unified system, displaying a far more sophisticated handling of subject interaction and overall coordination than that of any preceding period. While subjects were viewed as fairly specific bodies of knowledge that should be taught in a specific course-time, they were also considered branches of larger groupings. *History and Contemporary Studies* (Ontario Ministry of Education, 1986a), for example, was seen as part of a larger humanities/social science field. *Art* (Ontario Ministry of Education, 1986b) was also

seen as an integration of studio, design, and art history, while *Technological Studies* (Ontario Ministry of Education, 1985) and *Business Studies* (Ontario Ministry of Education, 1986c) saw themselves as "programs" rather than mere courses. To draw connections, enhance meanings and avoid overlap, a certain amount of integration was promoted by the documents themselves. At the center was *Circular OSIS* (Ontario Ministry of Education,1984). It laid out what courses were to be taught, how they were to generally interact, and what skills, values, and ideas were to permeate throughout the program. Curriculum committees were then mandated to use this document as an inspiration for each subject-based guideline as it went through a formalized process of curriculum review, draft, validation, and revision before it was ready for distribution to the school boards and schools.

Following the success of "Language Across the Curriculum" from the previous period, many new initiatives emerged promoting other skills and values across *all* subject areas: guidance, language, computer skills, and morals. Throughout all the documents of this time, teachers were encouraged to use cross-subject team teaching and joint planning as a way to coordinate the individual classes to reinforce meaning and efficiency. To create uniform and systematic coordination of subject matter, some documents even asked schools (usually through the principal) to develop linking mechanisms of the disparate subjects. In particular, this would include the development of "programs" (as opposed to simply courses) and departments related to *English* (Ontario Ministry of Education, 1987), *Technological Studies* (Ontario Ministry of Education, 1985), *Business Studies* (Ontario Ministry of Education, 1986c), *History and Contemporary Studies* (Ontario Ministry of Education, 1986a), and (Allied) *Arts* (Ontario Ministry of Education, 1986b).

Themes are mentioned by the Ministry but were treated by the various curriculum committees with hesitancy. While the thematic method appears in almost every course document, it is most fervently advocated in those subjects that had used it in the past (such as Art, English, History, Science, and Family Studies). Other courses such as Math, Music, Technological Studies, and Business Studies make only a nodding reference to thematic units. Without any other specific guidance from *Circular OSIS* (Ontario Ministry of Education, 1984), any further forms of integration seem hazy and scattered across the various documents. The myriad of designers all seemed to have had their own definition of what integration should look like and what should be included in the documents. Guidelines took a painfully long time to produce and were revised again and again (in the case of *Music*, over eight years). No doubt, integration was seen as a way to aid teaching, but it seemed that its concrete definition was left much more general than in the past.

The enthusiasm for a student-centered (i.e., uncontrolled) approach waned even further during this period. *Circular OSIS* (Ontario Ministry of Education, 1984) makes recommendations that curriculum creation should be shaped somewhat to meet individual needs. However, each guideline only expressed a desire to attend to students' more *generic* level of aptitude, to show the relevance of the subject matter, and to sequence the learning appropriate to student development without much student input.

During the 1980s, a new *Program Implementation and Review Branch* was created for "monitoring current programs in Ontario schools and keeping the public informed about the effectiveness of the educational system" (Ontario Ministry of Education, 1987-1988). The overwhelming purpose of this new system was to create efficiency and effectiveness, while not reinstating an elitist power base. This change, however, did much to topple the preeminence of the classroom teacher as chief integrator. While individual teachers were still considered important figures as "frontline" workers, the Ministry hoped that a great deal of the guesswork had been removed from the curriculum. Viewed less as lone scholars and more as team players, teachers were now expected to look towards integration practices that would involve them in school activities or at least bring them more into contact with the world outside the classroom. Almost all guidelines express serious anxiety that teachers might isolate themselves from the mainstream of the school, shutting their classroom doors. To combat this, the Ministry exhorted them to work together, share their experiences, and engage in informal mentoring as a way to keep the curriculum alive and unified. To further buttress the system, other stakeholders were brought in. Both principals and school boards were given the responsibility to coordinate local program committees, provide assistance to teachers, and perform continual program evaluations to make certain that the system was running smoothly (Ontario Ministry of Education, 1988).

3.8 Period 8—Diving Deep into Relevance: The Common Curriculum (1992-1996)

When the Liberals entered office, they commissioned a review of the educational system, especially focusing on the dropout rate. The *Radwanski Report* (1987) gave a scathing denunciation of the Ontario government's management of the curriculum:

> in terms of educational philosophy, the system has increasingly been running on empty … there is drift, in the form of an endless succession of improvisations, half-measures and compromises to bridge the gap between competing ideas. (p. 1)

Successive governments, the report said, had fiddled with the system without endorsing a clear vision of the final product. Legitimating much contemporary and past scholarship on the reunification of the curriculum, it warned that only a more holistic approach would increase student retention. While the Liberals had no time to act on this report (falling from power in 1989), the newly elected socialist New Democratic Party did. The populace appeared to have looked with optimism and expectancy to the NDP leader Bob Rae's campaign promises that he would create a unified, simplified curriculum and that he would streamline the bureaucracy to make it more efficient.

The *Common Curriculum Grades 1-9* represented a revolutionary break from the past. Created by a number of educational theorists, an initial draft was circulated in 1993 as a working document to schools, parents, and the general public for feedback. The emphasis was on accountability, excellence, equity, and partnership. The document explained that, in the past, the curriculum had been based on a disciplinary system. The real world, however, was not divided into disciplines. Thus, a subject-based curriculum would not be relevant enough for the student.

The new administration made a conscious decision to embrace the more experimental "Outcomes-Based Learning" that was sweeping most of North America in an attempt to force the system to become more flexible:

> In outcomes-based learning, curriculum refers to the varied experiences by means of which students achieve a set of defined outcomes. Students do not attain the outcomes through a set of prescribed learning experiences in one program area or in one grade; they attain them through a wide range of experiences encountered over several grades. These experiences, moreover, will include varied content drawn from all program areas. It should thus be clear that there is an essential link between outcomes-based learning and an integrated curriculum. (Ontario Ministry of Education, 1995, p. 23)

The Common Curriculum (Ontario Ministry of Education, 1995) offered a unified vision of curriculum. It began with a set of 10 essential learning outcomes that students were to attain by the end of grade 9 common to all subject areas. It offered general principles of learning, teaching, curriculum, and assessment/evaluation. Documents appeared for four core program areas: Language, The Arts, Self and Society, and Mathematics, Science and Technology.

Much of the government's new philosophy had taken root in the environment of academic publishing on interdisciplinarity (Drake, 1992; Jacobs, 1989; Klein, 1990; Miller, 1988; Miller & Seller, 1990). Both the resource document *Towards an Integrated Curriculum* (Ontario Ministry of Education, 1993a) and the *Common Curriculum* (Ontario Ministry of Education, 1995) present interdisciplinarity as a world-vision. The natural tendency of the mind is to seek patterns—therefore education should mimic this (Ontario Ministry of Education, 1993a). By linking students to the real world it was hoped that they would gain a "global perspective" and be prepared to manage change as lifelong learners (Ontario Ministry of Education, 1995). In fact, the new curriculum continually reinforced that students must not look at the world as disassociated facts, but as something that is composed of "systems" of various sizes (Ontario Ministry of Education, 1995).

The creators of the *Common Curriculum* believed that integration could not just naturally happen within a system that was divided along traditional disciplinary lines. The four program areas were connected by shared skills. Recognizing that this was a radical change to the system presently in place, they proposed an evolutionary format to reach this desired state of education. Initially teachers were allowed to begin with disciplinary courses, but the Ministry mandated that the new program must be organized in such a way that the interrelationships among subjects and topics were evident and meaningful to the student. At the same time, school-based curriculum committees were encouraged to organize and relate courses naturally through shared outcomes and understandings.

Outcome-based education (OBE) was intended to increase accountability, but the concept was not well understood and was widely resisted by many teachers (Miller et al., 2000). Many high school educators resented the fact that they had to "destream" their grade 9 classes. The outcomes themselves were often ambiguous and hard to interpret. Teachers had difficulty with creating a meaningful, synthesized curriculum. It was the beginning of an uneasy and hostile relationship between teachers and the government—and the end of the heyday of curriculum integration.

3.9 Period 9—An Accountable "Rigorous Curriculum" (1997-2009)

In 1995, the NDP government lost the next election to be replaced by the Conservatives. The new administration had a very different agenda—bringing back accountability to the educational system. The new leader, Mike Harris, attributed the victory to the party's platform dubbed "the Common Sense Revolution" against bureaucratic waste. Representative of the right-wing backlash sweeping the country at the time (seen especially in Alberta), it entailed the elimination of a hefty deficit through massive and immediate cutbacks to government expenditure.

At the Ministry of Education and Training, the change in government meant the continuation and expansion of the recommendations made by the NDP Royal Commission on Education Report, *For the Love of Learning* (Royal Commission on Learning, 1995)—a report that could be interpreted in many ways. To the Conservatives, the Report summed up the collective change in mentality that Ontario had undergone since the *Hall-Dennis Report*. Diversity and decentralization were no longer considered principal issues. Student achievement, according to a clear set of standards and measured by standardized tests, was the highest priority. The only way to achieve this end would be through a strong centralized authority with a clearly defined hierarchy of responsibilities.

For the Tories, the general public, and many educators, the *Common Curriculum* had been too vague and broad, resulting in an uneven patchwork of local curricula developed at the board level across the province. As well, it had perhaps been viewed as being a little too "progressive" in philosophy. In 1996, the new Minister of Education, John Snobelen (1996), announced that the Ministry would replace the document with a more "rigorous and demanding curriculum that would focus on the basics: reading, writing, spelling and grammar, math, science, geography, and Canadian history" (p. 1). Most important for a smoothly running system, he persistently stated that the new "expectations" would be clearly defined, measurable, and grade-specific (Snobelen, 1997). In short, they would be more accountable.

The creation and distribution of the curricula themselves reflected the changes that had taken place. Rather than seconding large numbers of stakeholders to help create the documents, the Conservatives posted invitations to bid. Contracts were then given to those who were specialists in the field and could perform the job most efficiently: in their own words, to show the taxpayers that they were getting "good value for money." Once completed, most sections of the new curriculum were then mandated in the summer of 1998, and the *Common Curriculum* immediately withdrawn.

Not unexpectedly, this period saw a drastic decline in the use of interdisciplinarity in the school system. After a number of "Expectations" were isolated by the curriculum committees, they were then subjugated into fairly focused subject areas: The study of English remained in language, arithmetic in mathematics, citizenship in history, and so on. It would appear that the prime consideration for this configuration was to achieve clearer accountability and efficiency. A particular expectation was delegated to a particular teacher, whose job it was to help the student reach this expectation at a particular time. If the student did not meet this expectation (as shown through standardized testing at Grades 3, 6, and 9), it could be easily spotted where the shortcoming occurred. In this mindset, any wholesale integration of these subject areas would merely lead to confusion and a breakdown of the system (as had happened with the *Common Curriculum*, Snobelen pointed out).

The curriculum documents do point out that some low-level integration could be made within the subject area, but only when they incidentally spring up. *Math* (Ontario Ministry of Education, 1997a), for example, occasionally mentions ways to interweave the various strands (geometry, probability, arithmetic, etc.) at natural points of intersection. For *English* (Ontario Ministry of Education, 1997b), the individual rules and skills of language must also be eventually combined in a logical order to instill a systematic approach. These reasons are mentioned as well in *Physical Education* and the *Arts*. Lastly, the *Science* (Ontario Ministry of Education, 1998) curriculum points out that, from time to time, it must be seen as an amalgam of science and technology, the two being interrelated. External integration (between subject areas) is mentioned in passing in most guidelines as well, but its uses were considerably limited.

4. The Present Story

4.1 At the Ministry of Education

Since the Liberal party took control of government in 2003, a number of evolutionary policy changes have taken place at the Ministry (although the continued focus remains on accountability). Most curriculum documents of the Harris era have been reviewed and refined. The next iterations have fewer expectations, are more explicitly concept-based, and include the new literacies such as media, critical, and technological literacies across the curriculum. Big ideas or concepts are explicitly identified in some of

the most recent guidelines. The revised *Arts* curriculum guideline for elementary schools (Ontario Ministry of Education, 2009a), for example, identifies four central ideas to be taught: creativity, communication, culture, and connections. The document calls for integrated learning and "making connections between the arts and other subjects (e.g., transferring knowledge, skills, and understanding to other subject areas)" (p. 6).

A number of policy/resource documents have also been created and maintained over the past decade that do support interdisciplinarity. These include (but are not limited to) character education, safe schools (bullying), healthy schools (daily physical fitness and obesity issues), service education, and literacy. They were created with the specific intention of fusing these areas into the already existing curriculum. These have had their ups and downs in execution, however. *Think Literacy: Cross-curricular Approaches Grades 7-12* (Ontario Ministry of Education, 2003), for example, does hearken back to the "Language Across the Curriculum" policy of the 1970s. But, since its inception, subject-based documents have been rewritten for grades 7-12. This practice does encourage the recognition that all teachers are literacy teachers, but does not go far enough to really foster interdisciplinary studies. Indeed, provincial subject organizations met in 2009 to discuss what literacy should look like in their specific disciplines (but not across subject areas).

The most exciting doorway to integration in the present curriculum is *Interdisciplinary Studies* (Ontario Ministry of Education, 2002). This innovative guideline provides ways to combine different subject areas to create high school credits—and still enables students to go on to higher education if so desired. What is unique about the document is that it offers a set of its own IDS (interdisciplinary studies) expectations. These revolve around research skills from an interdisciplinary perspective. Essentially the IDS expectations fall into three categories of "theory and foundations of interdisciplinary perspectives," "research processes," and "implementation, analysis, and evaluation." However, this is only available as options for Grades 11 and 12.

Beyond the rhetoric found in these documents, unfortunately, little work was done at the policy level to directly encourage boards to adopt an integrated approach. This trend was recently overturned, however, with two new policy documents that are considered important enough to attract professional development funding. First, *Acting Today, Shaping Tomorrow* (Ontario Ministry of Education, 2009b) now requires that environmental education be embedded into all subjects K-12. The second policy, *Growing Success* (Ontario Ministry of Education, 2010c), deals with reform to classroom assessment and reporting. The philosophy embedded in this document is

pertinent to a shift toward relevance and more integrated approaches to curriculum. There is an emphasis on assessment "OF," "FOR," and "AS" learning (Earl, 2003). Summative assessment *of* learning refers not only to tests but also to complex performance tasks (that are interdisciplinary by nature). Assessment *for* learning is diagnostic and formative. However, it reframes assessment as a continuous interactive process between learner and teacher; the challenge for the teacher is to create an environment for all students to learn. Many teachers see this as a support for differentiation and this often leads to curriculum integration. Finally, assessment *as* learning refers to the student's ability to self-assess and student metacognition. How a student learns crosses all subject areas.

Finally, in the fall of 2009, the Working Group on Elementary Curriculum appointed by the Ministry of Education released a discussion paper for province-wide consultation. The main concern in the paper was how to address overcrowding of the curriculum. The consultation involved an open survey posted on the website, focus groups of teachers and consultations around the province. As well, secondary research was conducted on curriculum trends around the world. Parents, community members, and students were also asked a series of targeted questions.

The result of this process has been the establishment of a need for a more streamlined curriculum that focuses on the big ideas and 21st century skills. It has also highlighted a need to address student self-respect, social interaction, and a sense of national identity. Overall, people expressed a need for an engaging and relevant curriculum that addresses the overcrowding of the curriculum with "less is more." Identified within the scope of the consultation were such aspects as strategies for planning an integrated program and identifying the big ideas that cross curriculum subject areas. One question that all participants were asked in Stage 2 was to identify the top three themes from the following list: character education, creative thinking skills, critical literacy, environmental education, equity/diversity/inclusiveness, global perspectives, healthy choices and active living, learning skills and work habits, literacy, numeracy, problem-solving skills, and technology/information technology. These themes all offer rich opportunities for integrated curriculum.

4.2 In the Field

When we started this study, we found few instances of integrated approaches in the province. Over time, and after asking many questions,

however, we discovered that a number of examples of such curriculum dotted the educational landscape. They were rarely heralded but quietly existed in their own little corner of the province.

Public School Initiatives: Students across the province may enroll in IDS courses (stemming from the 2002 document) if they are available at their high schools in Grades 11 and 12. Such courses do exist in schools where a teacher or teachers have championed them, but for most teachers the guideline is an unknown or unimportant entity.

Environmental studies programs are a good case of how the *Interdisciplinary Studies* document has been successfully implemented in the province. Here, several credits are combined to create a full semester program. Currently, there are about 30 public secondary schools with such programs listed on the Council of Outdoor Educators website (COEO, 2010). Bronte Creek Project in the Halton District School Board, for example, is a five-month program that combines four university-bound credits (English, interdisciplinary studies, physical education, Canada/world studies). The emphasis is on developing effective environmental leaders through building community, teamwork, and adventure activities (Bronte Creek Project, 2010). Other programs integrate social sciences and literature or arts, science, and fine arts, or emphasize community service and leadership.

Global education programs also show a commitment to integration. At the Simcoe County District School Board, for example, there is a one-semester Grade 11 program that integrates five subject areas under the IDS umbrella: English, Canada and world studies, visual art, history, and world religion. During this semester, the 28 students go to Cuba for two weeks and to Germany for four. The teachers decide on global themes such as freedom or responsibility (O'Sullivan & Vetter, 2007).

One exciting example of a systemic reform is a current project at the Bluewater District School Board. The Board began with interdisciplinary planning K-12 in a school struggling with large-scale testing. Bolstered by strong results, they then initiated interdisciplinary planning at the kindergarten level district-wide. These programs led to a district-wide initiative in 2008 for planning and implementing integrated curriculum. In 2009, Bluewater District School Board received a grant from the Ministry of Ontario to support this initiative at the intermediate level to support teacher training and external research. The results of this initiative were startling. Teachers and administrators described students as much more engaged, and teachers as excited about collaboration. Teachers taught literacy across the curriculum

rather than as blocks of language arts. Boys, in particular, were interested in literacy when it involved integration with technology. Many teachers were able to teach math in a real-world context which engaged students. Critical thinking increased. Assessment practices changed dramatically. Students completed rich performance tasks as culminating activities. Teachers found integrated curriculum an efficient way to assess more than one subject at a time and to assess "FOR" learning (Drake & Reid, 2010).

Private Sector Initiatives: In the private sector there are also examples of integration dotted across the province. Bishop Strachan School (BSS) is a K-12 girls school. Students in the elementary classrooms study themes across the year based on the Reggio Emilio model. This approach involves students having a voice in curriculum building, active learning, and building collaborative relationships. For example, in "Investigative Research" the seventh-graders have traveled back in time to New France to explore the world of Jeanne, the heroine from their summer reading book, *The King's Daughter*. Some students pursued an exploration of the novel through drama or dance and music, while others researched healing, building, or cooking methods of the time. The girls presented the fruits of their labor at the "Quatre Ruisseaux Fair" in the Great Hall (e-mail sent to parents from The Bishop Stachan School, October 23, 2009).

At the Toronto District Christian High School (2010), students in Grades 11 and 12 can choose double credits in the Block Program. There are five different blocks: environment, French-history, video, international co-op, and social justice blocks. In the French-history block, for example, students increase their knowledge of French as they deepen their understanding and appreciation of Canadian Francophone culture and explore the local, national, and global forces that have shaped Canada's national identity since World War I. In the international co-op, students go to Belize for three months and live with local families. Students have service placements at such places as orphanages, hospitals, and schools.

There are also some private organizations developing curriculum. One example, *Roots of Empathy* (Gordon, 2005), is an award-winning, evidence-based classroom program that has shown dramatic effect in reducing levels of aggression among schoolchildren by raising social/emotional competence and increasing empathy. During this program a neighborhood infant and parent visit the classroom every three weeks over the school year. A trained instructor coaches students to observe the baby's development and to label the baby's feelings. The instructor uses the baby to help children identify

and reflect on their own feelings and the feelings of others. Ultimately this program teaches "emotional literacy" (Roots of Empathy, 2010).

Publications: Integrated curriculum or interdisciplinarity has not been highlighted at local conferences, and little is written in provincial journals. Instead, most publications during this era have been about explicit mandates of the Ministry such as literacy, numeracy, strategies in specific subject areas, teaching for equity and social justice, collaboration and professional learning communities (one recent exception has been a joint Ministry of Education/ Faculties of Education conference in May 2010 that focused on a number of interdisciplinary projects). It is only in the last three years that there have emerged some articles in Ontario professional journals touching on curriculum integration. The Elementary Teachers' Federation school journal, *VOICE*, for example, published an issue (10.4) in 2006 devoted to teaching with technology that crossed subject boundaries. Its sister organization, the Ontario Secondary School Teachers' Federation journal, *Education Forum,* has included only two articles that could also be interpreted as addressing interdisciplinarity (Duncan & Arcus, 2009; Heikkila, 2009). However, there are few works written recently that directly address curriculum integration (exceptions include Benedict, 2009; Drake, 2008a, 2008b; Drake & Reid, 2010).

5. The New Story?

As we traced the historical shifts between integration and discipline-based curricula we saw that, over time, the pendulum swings have become more rapid and erratic as the province has tried to deal with problems within the education system. Presently, we see continued emphasis on rigor and accountability. But, emerging from research and evidence-based practice, there is also a move toward creating innovative and meaningful curriculum. We cannot predict the results of the present situation with certainty, but we do know that the perceived problem of an overcrowded curriculum will not go away without a radical rethinking of it. Inevitably, this perception should mean moving away from silos of knowledge to a more integrated approach. However, as Ontario's history has shown, other factors have also influenced the province's thinking.

Our speculations for the future, therefore, are based on our perceptions of the current directions of the Ministry and rooted in the past. For us, the road to the future has seven main interconnected thrusts that will increase the necessity to use interdisciplinary practices.

5.1 Maintaining Accountability and Enhancing Relevance

Ontario will keep its core priorities, such as high levels of student achievement, reducing the gaps in achievement, and increasing public confidence in the system (Ontario Ministry of Education, 2010a). Thus, evidence-based innovation and the focus on integrating research, theory, and practice will remain the norm. In curriculum planning, the backward design process will continue to be the design of choice because it ensures curriculum alignment of content, instruction, expectations, and assessment. However, at the same time, there will be continued attempts to create relevant curriculum through such reforms that have now been established in preliminary form: interdisciplinary courses (dual credits); wide range of course choices; cooperative education; credit for external experience with community partners (Ontario Ministry of Education, 2008).

5.2 Integrating the Big Picture

Newly created curriculum guidelines are becoming more explicit in naming more generalized concepts that students should learn from K-12. From this, teachers may be able to see a more unified vision of education and embed their lesson planning in it. For example, in the *Science and Technology* (Ontario Ministry of Education, 2007) guidelines, there is a shift to an emphasis on "Systems" and "Connections" to the real world rather than content-memorization. Math documents are also moving toward concept-based learning as opposed to being algorithm-driven. Most recently, *The Arts, 1-8* (Ontario Ministry of Education, 2009a) document identifies three skills as the most important from K-12: creativity, critical analysis, and making connections across subject areas. We expect that this trend will continue and that there will be a drive for more general understanding not tied to any specific discipline. With luck, a unifying document may be created to help teachers see these connections.

5.3 Literacies

Efforts to deepen and widen literacy and numeracy initiatives will continue to be of the utmost importance throughout the province and will soon transcend the traditional subject-based definitions. In its policy statement, *Reach Every Student*, the Ministry emphasizes "how literacy and numeracy interact with learning in all subjects to contribute to the development of the whole student" (Ontario Ministry of Education, 2008, p. 6). This is clearly an invitation to interdisciplinary curriculum.

5.4 Assessment

In the past, the need for "rigorous" assessment has always led to the downfall of curriculum integration in the province. However, we believe that the new assessment policy document *Growing Success* (Ontario Ministry of Education, 2010c) will have a profound effect on how Ontario deals with curriculum integration in the future. As the province continues to align its philosophy with authentic feedback, we believe that this will be the key to ensuring both relevance and accountability in the curriculum, opening the door for interdisciplinarity.

5.5 Addressing Values

We believe that character education and socio-emotional learning will continue to grow in importance, as programs like *Roots of Empathy* take hold. In many classes across the province, teachers will be encouraged to design their instructional activities with more focus on the attitudes, behaviors, and habits of mind that they want students to display. This cannot be done in the traditional disciplinary model.

5.6 Differentiated Learning

Current specialized foci, such as targeted resources and training for boys' literacy, special needs, or First Nations, Métis, and Inuit education, all stress different ways of learning/teaching/assessment. We see this list as continuing to grow. Ultimately, the push for differentiation will drive a more interdisciplinary approach as students who learn through the arts, for example, will require different teaching/learning/assessing. As well, we see the appearance of more schools that allow students to co-create the curriculum with the teachers.

5.7 The New HOTS

*"*Higher Order Thinking Skills" has always included skills such as critical thinking, analysis, evaluation, and synthesis. But as we find ourselves deeper and deeper in the "Knowledge Society," we see that the future of both teaching and learning goes far beyond our traditional conceptions of these skills. We see a need for systems thinking and global thinking to ensure that decisions are made from many relevant different perspectives. The ability to see both the big picture and the detailed day-to-day picture is also crucial—what Martin (2007) identifies as integrative thinking. Each of these ways of processing information is beyond the confines of traditional disciplinary procedures.

Some Concluding Remarks

Given the history of interdisciplinarity in this province, we can assume that there will be some pendulum swing from a disciplinary to an integrated approach. In the fall of 2010, the government seems to be expanding its agenda beyond accountability goals to include a more engaging and relevant curriculum. Certainly many events on the horizon suggest that we may be at a tipping point—the beginning of the shift back to relevance and meaning. However, with all these changes, we also suspect that the traditional structure will remain intact and continue to dominate the classroom. While this model may offer useful ways to explore the world, each discipline can only go so far in informing our ways of knowing. It is only through the lenses of several disciplines that we can reach any helpful conclusions in this interdependent world in which we live. Thus, for progress to be made in Ontario in the 21st century, we see it as a fact of life that the new story must be inclusive of both disciplines and a variety of models for generating interdisciplinary knowledge. In that way, the dramatic swings of change may become gentler with a much smaller arc as the pendulum hopefully comes closer to resting at an equilibrium position as a truly new way to educate emerges.

Biographical Note: As a college professor, Dr. Kurt W. Clausen was constantly frustrated by not being allowed to make natural connections between subject areas. In response to his questions of why systemic changes could not be made, the justifications remained constant: "because discipline-based education is easier, more efficient, and more accountable." Most importantly, it was explained that this was the way things "had always been done." This rationale persisted in irking him and acted as a catalyst for his doctoral work*, The Meaning and Implementation of Curriculum Integration* (2001). Dr. Clausen continues to investigate such approaches as an associate professor of curriculum studies at Nipissing University, North Bay, Ontario. E-mail : kurtc@nipissingu.ca

As a secondary teacher, Dr**.** Susan Drake found she could only manage her classes if she made the lessons so interesting that the students paid attention. The answer she found was to make the curriculum relevant to their experience. Her experiments led her to teach in interdisciplinary and holistic ways. As a doctoral student, she studied the theory behind holistic integrated models of education. Now in her 20th year as a professor (presently at Brock University), her research has revolved around how to

design and implement interdisciplinary curriculum. She has worked with curriculum teams locally, nationally, and internationally, and she has written seven books on integration including *Creating Integrated Standards-Based Curriculum: Aligning Curriculum, Content, Assessment and Instruction* (2007) Corwin Press, and *Meeting Standards with Integrated Curriculum* (2004) ASCD (with Rebecca Burns).E-mail: Susan.Drake@Brocku.ca

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